



Shogun Green Laser Head

ORDERCODE 30971



SHOWELECTRONICS FOR PROFESSIONALS

Congratulations!

You have bought a great, innovative product from Showtec.

The Showtec Shogun Laser Head brings excitement to any venue. Whether you want simple plug-&-play action or a sophisticated DMX show, this product provides the effect you need.

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We design and manufacture professional light equipment for the entertainment industry.

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Always get the best -- with Showtec !

Thank you!



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WARNING



CAUTION!
Keep this device away from rain and moisture!
Unplug mains lead before opening the housing!



**FOR YOUR OWN SAFETY, PLEASE READ THIS USER MANUAL CAREFULLY
BEFORE YOUR INITIAL START-UP!**

SAFETY INSTRUCTIONS

Every person involved with the installation, operation and maintenance of this device has to:

- be qualified
- follow the instructions of this manual



CAUTION! Be careful with your operations.
With a dangerous voltage you can suffer
a dangerous electric shock when touching the wires!



Before your initial start-up, please make sure that there is no damage caused by transportation. Should there be any, consult your dealer and do not use the device.

To maintain perfect condition and to ensure a safe operation, it is absolutely necessary for the user to follow the safety instructions and warning notes written in this manual.

Please consider that damages caused by manual modifications to the device are not subject to warranty.

This device contains no user-serviceable parts. Refer servicing to qualified technicians only.

IMPORTANT:

The manufacturer will not accept liability for any resulting damages caused by the non-observance of this manual or any unauthorized modification to the device.

- Never unscrew the housing!
- Never aim the laser beam at people or animals!
- Never let the power-cord come into contact with other cables! Handle the power-cord and all connections with the mains with particular caution!
- Never remove warning or informative labels from the unit.
- Never use anything to cover the ground contact.
- Never run the device without lamp!
- Never look directly into the light source.
- Never leave any cables lying around.
- Do not insert objects into air vents.
- Do not connect this device to a dimmerpack.
- Do not switch the device on and off in short intervals, as this would reduce the lamp's life.
- Do not shake the device. Avoid brute force when installing or operating the device.
- Only use device indoor, avoid contact with water or other liquids.
- Only operate the device after having familiarized with its functions.
- Avoid flames and do not put close to flammable liquids or gases.
- Always check the regulations when using a class A laser product.
- Always check and position the laser before anybody enters the room, when the laser is facing an area with people.

- Always allow free air space of at least 50 cm around the unit for ventilation.
- Always disconnect power from the mains, when device is not used, before cleaning! Only handle the power-cord by the plug. Never pull out the plug by tugging the power-cord.
- Make sure that the device is not exposed to extreme heat, moisture or dust.
- Make sure that the available voltage is not higher than stated on the rear panel.
- Make sure that the power-cord is never crimped or damaged. Check the device and the power-cord from time to time.
- If device is dropped or struck, disconnect mains power supply immediately. Have a qualified engineer inspect for safety before operating.
- If the device has been exposed to drastic temperature fluctuation (e.g. after transportation), do not switch it on immediately. The arising condensation water might damage your device. Leave the device switched off until it has reached room temperature.
- If your Showtec device fails to work properly, discontinue use immediately. Pack the unit securely (preferably in the original packing material), and return it to your Showtec dealer for service.
- For adult use only. Lighteffect must be installed out of the reach of children. Never leave the unit running unattended.
- For replacement use fuses of same type and rating only.
- The user is responsible for correct positioning and operating of the laser. The manufacturer will not accept liability for damages caused by the misuse or incorrect installation of this laser.
- This device falls under protection class I. Therefore it is essential to connect the yellow/green conductor to earth.
- The laser will only work between 18-30°C.
- After 3 hours working, you must shut off the laser and let the laser diode cool off for 30 minutes, otherwise the laser could be damaged and the warranty becomes void.
- Repairs, servicing and electric connection must be carried out by a qualified technician.
- WARRANTY: Till one year after date of purchase.



CAUTION ! EYEDAMAGES !.
Avoid looking directly into the light source.
(meant especially for epileptics) !



OPERATING DETERMINATIONS

This device is not designed for permanent operation. Consistent operation breaks will ensure that the device will serve you for a long time without defects.

The minimum distance between light-output and the illuminated surface must be more than 0.8 meter.

The maximum ambient temperature t_a must never be exceeded.

If this device is operated in any other way, than the one described in this manual, the product may suffer damages and the warranty becomes void.

Any other operation may lead to dangers like short-circuit, burns, electric shock, lamp explosion, crash etc. You endanger your own safety and the safety of others!

Rigging

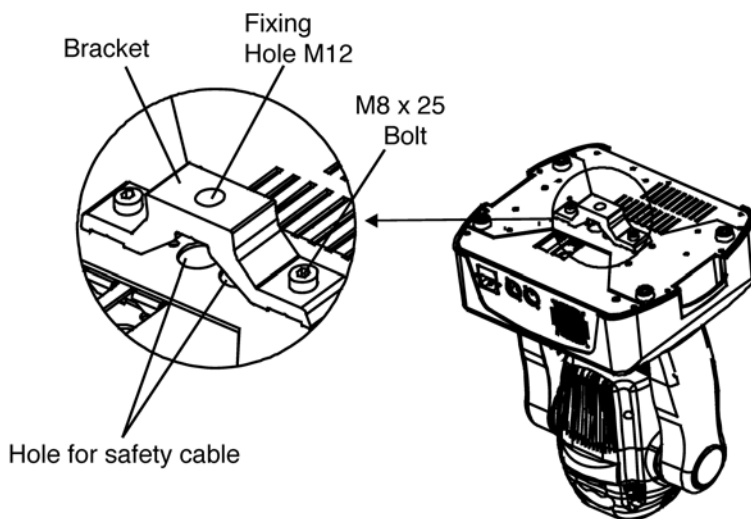
Please follow the European and national guidelines concerning rigging, trussing and all other safety issues.

Do not attempt the installation yourself !

Always let the installation be carried out by an authorized dealer !

Procedure:

- If the laser is lowered from the ceiling or high joists, professional trussing systems have to be used.
- Use a clamp to mount the laser, with the mounting-bracket, to the trussing system.
- The laser must never be fixed swinging freely in the room.
- The installation must always be secured with a safety attachment, e.g. an appropriate safety net or safety-cable.
- When rigging, derigging or servicing the laser, always make sure, that the area below the installation place is blocked and staying in the area is forbidden.




Improper installation can cause serious damage to people and property !

Connection with the mains

Connect the device to the mains with the power-plug.

Always pay attention, that the right color cable is connected to the right place.

| Cable | Pin | International |
|--------------|-------|---|
| BROWN | FASE | L |
| BLUE | NUL | N |
| YELLOW/GREEN | EARTH |  |

Make sure that the device is always connected properly to the earth!

Description of the device

Features

The Showtec Shogun Laser Head is a laser effect with a high output and great effects.

- 3 versions available: 100 mW red laser (30970), 60 mW green laser (30971), 60 mW blue laser (30972)
- DMX-control via standard DMX-controller
- Pan 360°
- Tilt 265°
- 8 DMX-control channels required
- Sound-controlled via built-in microphone
- Fuse 3A / 250V

Overview



Fig. 1

- 1) Display
- 2) Sound Sensitivity
- 3) Pattern Size
- 4) Microphone

Backside



Fig. 2

- 5)** DMX signal connector (IN)
- 6)** DMX signal connector (OUT)
- 7)** IEC Power Connector and Fuse 2A / 250V

Set Up and Operation

Follow the directions below, as they pertain to your preferred operation mode.

Before plugging the unit in, always make sure that the power supply matches the product specification voltage. Do not attempt to operate a 120V specification product on 230V power, or vice versa.

The laser will only work between 18-30°C.

After 3 hours working, you must shut off the laser and let the laser diode cool off for 30 minutes, otherwise the laser could be damaged and the warranty becomes void.

Always disconnect from electric mains power supply before cleaning or servicing.

Damages caused by non-observance are not subject to warranty.

One Shogun Laser Head

1. Fasten the moving head onto firm trussing (Use a 30-kg rated or stronger C-clamp fastened onto the Shogun Laser Head). Leave at least 1 meter on all sides for air circulation.
2. Plug one end of the electric mains power cord into the IEC socket on the unit.
Then plug the other end of the cord into a proper electric power supply socket.
3. Below you will see the menu setting, if you want to run the Shogun as a stand-alone unit.

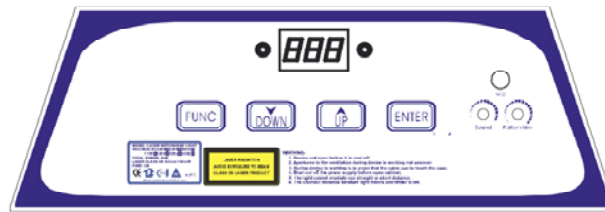


Fig. 3

| Function | Menu Setting |
|--------------------------|--------------|
| DMX Control | 001 |
| Sound Control | 002 |
| Auto-Mode | 003 |
| Subordinate Operate | 004 |
| Address Code Set | 005 |
| Sound-active auto speed | 006 |
| Reset ON/OFF | 007 |
| X-line reverse enactment | 008 |
| Y-line reverse enactment | 009 |

After the display shows you the Function Number (001-009). You can press up/down (Yes/No), continued by pressing the Enter button to confirm or deny your setting.

- For DMX Control, first set Menu 001 to YES and then menu 005 to YES.
Finally set the channel you want for your device (000=DMX Channel 0)
- If you use Soundcontrol, first set Menu 002 to YES and then menu 006 to YES. If Menu 006 is set to 0, it may appear that the device doesn't react to sound. However it responds very slowly. To achieve a faster reaction set Menu 006 to a higher speed.
- Be sure that the pattern size knob on the back is not set to its minmum, otherwise it seems that the device doesn't function and you only see a spot on the wall and no patterns.

Multiple Shogun Laser Heads

1. Fasten the effect light onto firm trussing (Use a 30-kg rated or stronger C-clamp fastened onto the Shogun Laser Head). Leave at least 1 meter on all sides for air circulation.
2. Use a 3-p XLR cable to connect the Shoguns and other devices.

The pins:



1. Earth
2. Signal -
3. Signal +

3. Link the units as shown in (figure 4), Connect a DMX signal cable from the first unit's DMX "out" socket to the second unit's "in" socket. Repeat this process to link the second, third, and fourth units.
4. Supply electric power: Plug electric mains power cords into each unit's IEC socket, then plug the other end of the mains power cord into proper electric power supply sockets, starting with the first unit. Do not supply power before the whole system is set up and connected properly. Design your show according to your DMX controller functions.

DMX Set Up

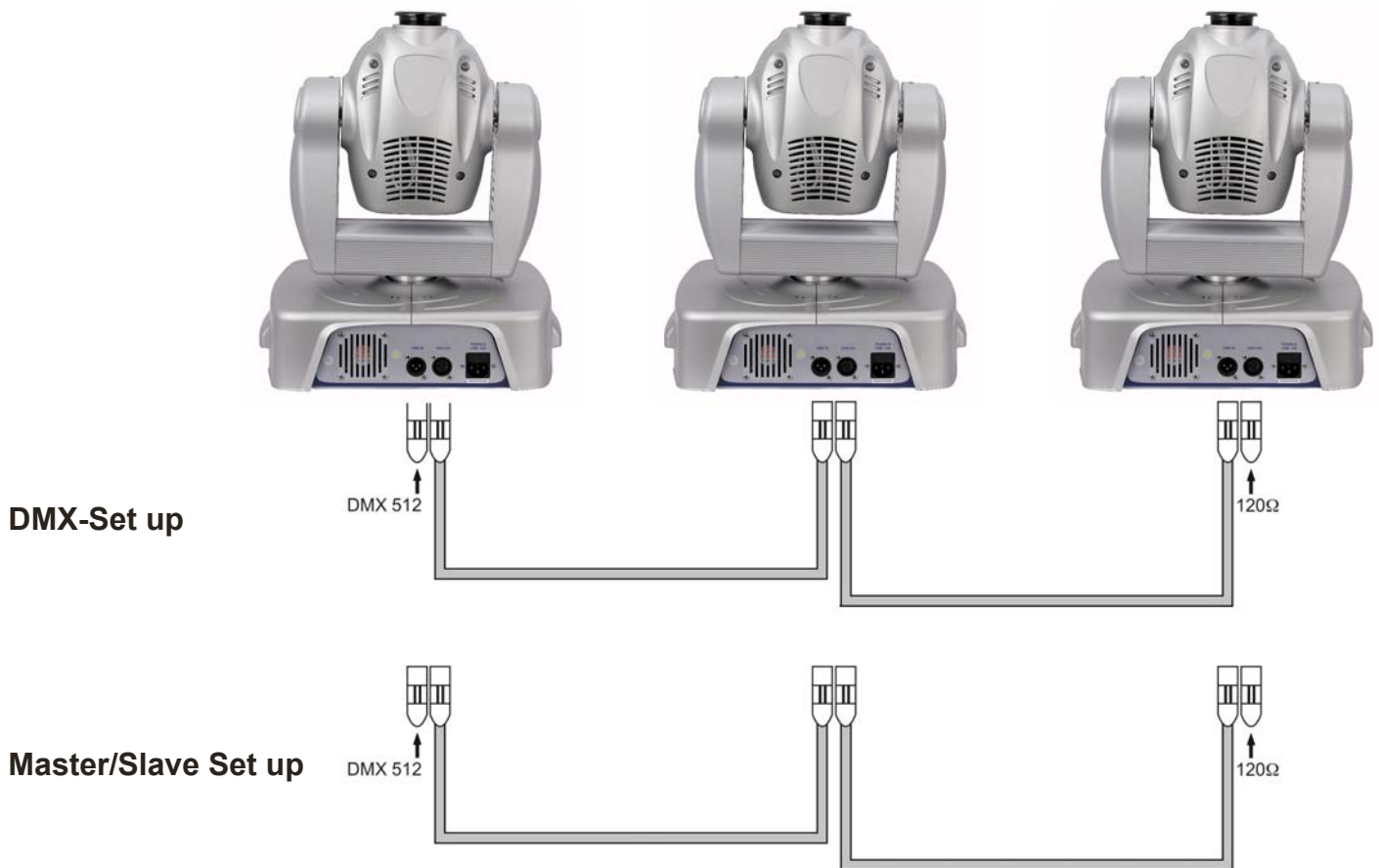


Fig. 4

Note : Link all DMX cables before connecting electric power

DMX Protocol

Channel 1 –Pan (Horizontal)

| | |
|-------|----------|
| 0-255 | 0 - 370° |
|-------|----------|

Channel 2 –Tilt (Vertical)

| | |
|-------|----------|
| 0-255 | 0 - 265° |
|-------|----------|

Channel 3 –Picture

| | |
|-------|-------------|
| 0-255 | 12 pictures |
|-------|-------------|

Channel 4 –Picture Roll (Vertical)

| | |
|-------|---|
| 0-255 | Roll vertical line like mirror image, compress fold |
|-------|---|

Channel 5 – Picture Roll (Horizontal)

| | |
|-------|---|
| 0-255 | Roll horizontal line like mirror image, compress fold |
|-------|---|

Channel 6 –Picture Roll

| | |
|-------|---------------------------------|
| 0-255 | Roll around the center (0-360°) |
|-------|---------------------------------|

Channel 7 –Picture Size

| | |
|-------|---|
| 0-255 | Bigger (0) from the center to smaller (255) |
|-------|---|

Channel 8 –Reset

| | |
|---------|------------|
| 0-127 | Open Light |
| 128-254 | Blackout |
| 255 | Reset |

The Shogun Laser Head can be operated with a controller in **control mode** or without the controller in **stand-alone mode**.

Control Panel

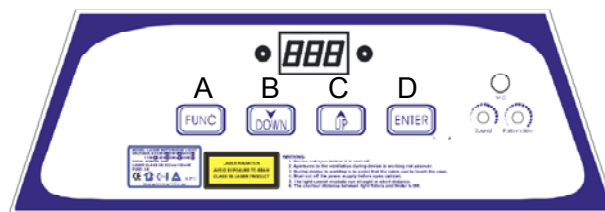


Fig. 5

- A. Function Button
- B. Down Button
- C. Up Button
- D. Enter Button

Control Mode

The fixtures are individually addressed 0-511 on a data-link and connected to the controller.

The fixtures respond to the DMX signal from the controller. (When you select the DMX address and save it, the controller will display the saved DMX address the next time.)

DMX Addressing

The control panel on the front side of the base allows you to assign the DMX fixture address, which is the first channel from which the Shogun will respond to the controller.

Please note when you use the controller, the unit has **8** channels.

When using multiple Shoguns, make sure you set the DMX addresses right.

Therefore, the DMX address of the first Shogun should be **1(001)**; the DMX address of the second Shogun should be **1+8=9 (009)**; the DMX address of the third Shogun should be **9+8=17(017)**, etc.

Please, be sure that you don't have any overlapping channels in order to control each Shogun correctly.

If two or more Shoguns are addressed similarly, they will work similarly.

Controlling:

After having addressed all Shogun fixtures, you may now start operating these via your lighting controller.

Note: After switching on, the Shogun will automatically detect whether DMX 512 data is received or not. If there is no data received at the DMX-input, the "**LED**" on the control panel will not flash.

The problem may be:

- The XLR cable from the controller is not connected with the input of the Shogun.
- The controller is switched off or defective, the cable or connector is defective, or the signal wires are swapped in the input connector.

Note: It's necessary to insert a XLR termination plug (with 120 Ohm) in the last fixture in order to ensure proper transmission on the DMX data link.

Press the UP or DOWN button and the display will show the DMX start address.

Confirm your choice by pressing the ENTER button, this will save and set the DMX start address. The display will show the latest setting each time the projector is powered up. To control the projector with a DMX controller the DMX start address must be set. Ensure that none of the Stand-Alone options are set or they will interfere with correct DMX operation.

Press the ENTER button to confirm the change. The product will show the latest setting value when you operate next time.

Maintenance

The Showtec Shogun Laser Head requires almost no maintenance. However, you should keep the unit clean. Otherwise, the fixture's light-output will be significantly reduced. Disconnect the mains power supply, and then wipe the cover with a damp cloth. Do not immerse in liquid. Carefully wipe both mirrors clean with glass cleaner and a soft cloth. Do not use alcohol or solvents.

The mirrors will require regular cleaning, as smoke-fluid tends to build up residues, reducing the light-output quickly.

Keep connections clean. Disconnect electric power, and then wipe the DMX and audio connections with a damp cloth. Make sure connections are thoroughly dry before linking equipment or supplying electric power.

The following points have to be considered during the inspection:

1. All screws used for installing the device or parts of the device have to be tightly connected and must not be corroded.
2. There may not be any deformations on housings, fixations and installation spots.
3. The electric power supply cables must not show any damages or material fatigue.

Replacing the Fuse

Power surges, short-circuit or inappropriate electrical power supply may cause a fuse to burn out. If the fuse burns out, the product will not function whatsoever. If this happens, follow the directions below to do so.

1. Unplug the unit from electric power source.
2. Insert a screwdriver into the slot in the fuse cover. Turn the screwdriver to the left, at the same time gently push a bit (Turn and Push). The fuse will come out.
3. Remove the used fuse. If brown or unclear, it is burned out.
4. Insert the replacement fuse into the holder where the old fuse was. Reinsert the fuse cover. Be sure to use a fuse of the same type and specification. See the product specification label for details.

Troubleshooting

No Light

This troubleshooting guide is meant to help solve simple problems. If a problem occurs, carry out the steps below in sequence until a solution is found. Once the unit operates properly, do not carry out following steps.

If the light effect does not operate properly, refer servicing to a technician.

Response: Suspect three potential problem areas: the power supply, the lamp, the fuse.

1. Power supply. Check that the unit is plugged into an appropriate power supply.
2. The laser Return the device to your Showtec dealer.
3. The fuse. See page 11 for replacing the fuse.

No Response to DMX

Response: Suspect the DMX cable or connectors, a controller malfunction, a light effect DMX card malfunction.

1. Check the DMX cable: Unplug the unit; change the DMX cable; then reconnect to electrical power. Try your DMX control again.
2. Determine whether the controller or laser effect is at fault. Does the controller operate properly with other DMX products ? If not, take the controller in for repair. If so, take the DMX cable and the light effect to a qualified technician.

Product Specification

Model: Showtec Shogun Laser Head

Voltage: 240V-50Hz (CE)

Fuse: 2A / 250V

Weight: 9,5 kg

Operation and Programming

DMX Channels 8

Signal input 3-pin XLR male

Signal output 3-pin XLR female

DMX-control via standard DMX-controller

Laser

100 mW red laser (635nm), ordercode 30970)

60 mW green laser (532nm), ordercode 30971

60 mW blue laser (473nm), ordercode 30972

Minimum distance:

Minimum distance from flammable surfaces: 0.5m

Minimum distance to lighted object: 0.8m

Design and product specifications are subject to change without prior notice.





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